

Question	Answer
12.	By the $\angle$ Add. Post., $m\angle ATB = 40^\circ$ . $m\angle BAT = 40^\circ$ by the Alt. Int. $\triangle$ Thm. $\angle ATB \cong \angle BAT$ by def. of $\cong$ . Since $\angle ABT$ is isosc. by the Converse of the Isosc. $\triangle$ Thm., $BT = BA = 2.4$ mi.
13.	$69^\circ$
15.	$130^\circ$ or $172^\circ$
17.	92
19.	26
21.	It is given that $\triangle ABC$ is isosc. $\overline{AB} \cong \overline{AC}$ , $P$ is the mdpt. of $\overline{AB}$ , and $Q$ is the mdpt. of $\overline{AC}$ . By the Mdpt. Formula, the coords. of $P$ are $(a, b)$ , and the coords. of $Q$ are $(3a, b)$ . By the Dist. Formula, $PC = QB = \sqrt{9a^2 + b^2}$ , so $\overline{PC} \cong \overline{QB}$ by the def. of $\cong$ .
28.	$m\angle 1 = 58^\circ$ ; $m\angle 2 = 64^\circ$ ; $m\angle 3 = 122^\circ$
30.	It is given that $\triangle ABC$ is isosc. $\overline{BA} \cong \overline{BC}$ , and $X$ is the mdpt. of $\overline{AC}$ . Assign the coords. $A(0, 2a)$ , $B(0, 0)$ and $C(2a, 0)$ . By the Mdpt. Formula, the coords. of $X$ are $(a, a)$ . By the Dist. Formula, $AX = XB = XC = a\sqrt{2}$ . So $\triangle AXB \cong \triangle CXB$ by SSS.